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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,210	06/26/2003	Yoshikazu Hanada	Q76020	4368

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EXAMINER

ADDISU, SARA

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,210	<b>Applicant(s)</b> HANADA, YOSHIKAZU	
	<b>Examiner</b> Sara Addisu	<b>Art Unit</b> 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/2/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: \*\*\*

- Page 9, line 6, main stage referred to as "110"
- Page 10, line 11, disc shaped cutting blade referred to as "12"

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what the applicant defines as "mortar-shaped recess and circular protrusion". Further review of the drawings and Specification do not clarify this subject matter.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

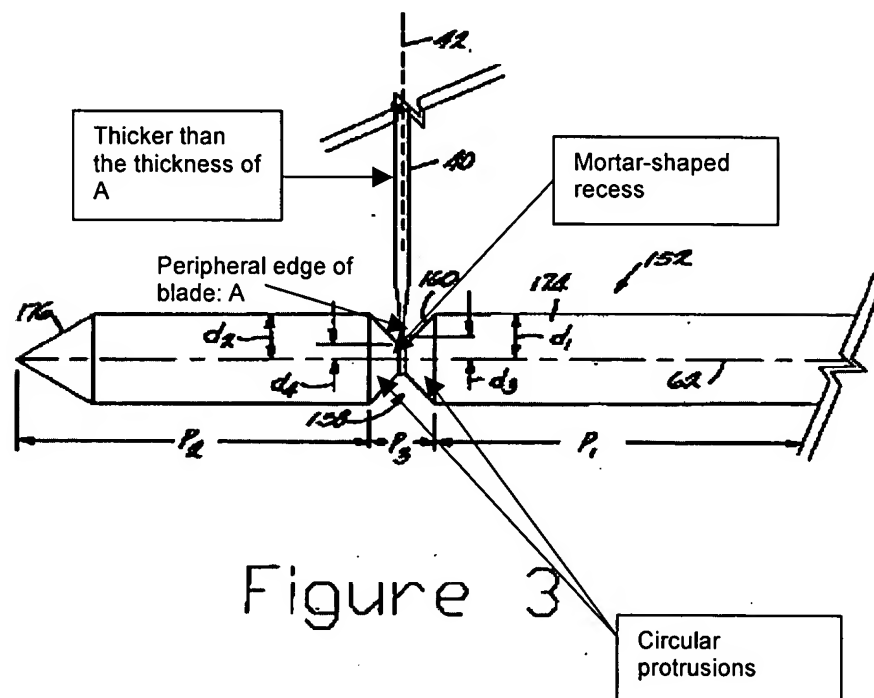
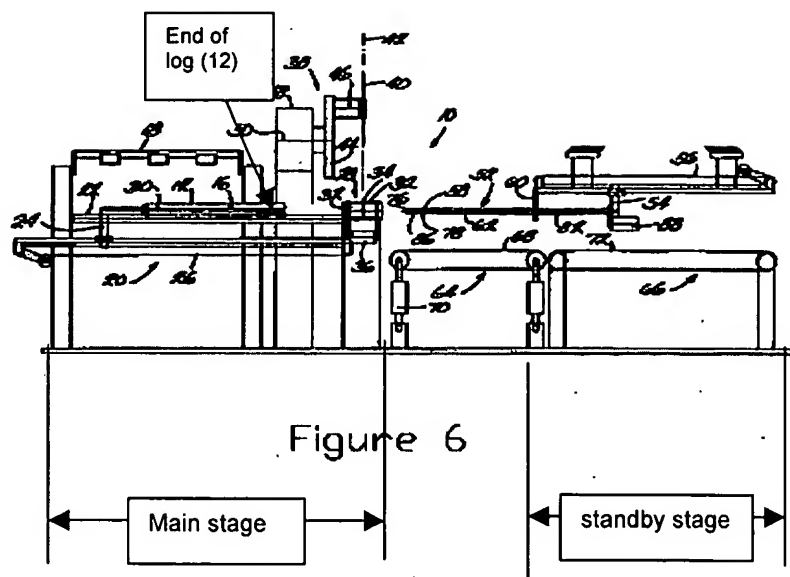
Claims 1, 2, 4, 7-9, 13, 15, 16, 18 and 19, as best understood are rejected under 35 U.S.C. 102(e) as being anticipated by Butterworth (U.S. Patent No. 6,718,853).

Butterworth teaches a cutting mandrel (52) having a ring-shaped groove/recess (158: formed by machining, casting, forming, molding and the like, Col. 6, lines 12-14) that corresponds to a cutting position of the cutting blade in the axial direction of the cutting mandrel (see figure 3). Mandrel (52) is positioned within the aperture (16) of log (12) such that its outer peripheral surface comes into contact with an inner surface of the log (12) (Col. 6, lines 33-34). Butterworth also teaches a disc-shaped saw blade (40) positioned opposite to the outer periphery of the log (12) and having cutting edges at its circumference. Furthermore, Butterworth teaches log (12) being rotated by rotating device/motor (36) as well as a motor for rotating the cutting blade (40) (Col. 4, lines 64-67 and Col. 5, lines 19-21). Additionally, Butterworth teaches saw assembly (10) having a main stage and a standby stage (see diagram below) where the standby stage includes a carriage (with mandrel) mounted on a rail such that mandrel (52) is moved longitudinally toward or away (figures 6-9) from the main stage and is positioned coaxially with log (12) where it is supported by log trough (22) (Col. 5, lines 43-57). Butterworth teaches clamp assembly (a driving chuck unit) (28) provided on the main stage opposite to the standby stage that holds an end of the log (12) while the mandrel (12) approaches the paper pipe from the standby stage. Butterworth teaches rotation of

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log, cutting blade and cutting mandrel, therefore for the apparatus to be operational, the rotations have to be controlled to be within a certain range. As for the phrase used by the applicant in Claims 1 & 18, "... a difference between linear rotation velocities of the paper pipe rotating device and the cutting blade rotating device is controlled within a certain range" and in Claim 2, "...the linear rotation velocity controller controls the respective rotational linear velocities of the cutting mandrel rotating device, the paper pipe rotating device and cutting blade rotating device to be within a certain range", it is merely intended use and the apparatus taught by Butterworth is capable of functioning such that the rotating components are synchronized and operate within a certain range.

Regarding claim 16, Butterworth teaches a the cutting mandrel (52) comprising a central shaft (main pipe) (74) and a plurality of mandrel pieces sequentially inserted around the main pipe (i.e. sleeves 82) each mandrel piece having a mortar-shaped recess on its edge and a circular protrusion, and when the mandrel pieces are sequentially inserted around the central shaft (main pipe) (74), the leading tips of the protrusions come in contact with each other so that a gap to form grooves at the outer peripheral ends of the mandrel pieces (see figures below).



### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Elliott (U.S. Patent No. 5,004,383).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to deburring the inner periphery of the already cut pieces.

Elliott teaches a deburring device (10) having an inner edge cutting assembly (18) that contacts tube end (12) (see figure 1). Elliott also teaches cutting assembly (18) having conical (tapered) surface (26) (Col. 2, lines 46-52) that rotates to smooth the inner periphery of the pipe. Furthermore, Elliott teaches the deburring device rotating in two opposite directions (First and Second directions) (Col. 3, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a tapered cutting assembly (18) on the end of the pipes cut by of Butterworth's invention as taught by Elliott for the purpose of removing the burrs (i.e. make smooth) from the inner periphery of the pipes ('383, Col. 1, lines 6-8). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the tapered cutting assembly (18) of Elliott's invention simultaneously on both ends of the pipes cut by Butterworth's invention for the purpose of saving time. Additionally, given the fact that Elliott's

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invention can rotate in to different directions (First and Second , as set forth in the above rejection), it would have been obvious to one of ordinary skill in the art at the time of the invention was made to rotate the two deburring devices in opposite direction in order to achieve a smooth surface (i.e., if both devices are moving in the same direction, the pipe tends to be rotated as well achieving nothing).

Claims 5, 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Stoffels et al. (U.S. Patent No. 4,292,867).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to teach the cutting blade and paper pipe rotating at the same speed. Butterworth also fails to teach the pipe cutting device and the cutting mandrel rotating device being rotated by a common driving source.

Stoffels et al. teaches circular cutting blade (42) rotating at approximately the same circumferential speed as the outer surface of roll (R) (with the mandrel inserted inside) by a variable speed motor (46) (Col. 4, lines 41-44). Stoffels et al. also teaches the cutting mandrel and the pipe being coaxial (in agreement with Page 4, lines 17-20 of the Instant Application).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Butterworth's invention such that log (12) rotates at a velocity that is equal to the rotational velocity of the cutting blade (40), as



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taught by Stoffels et al., for the purpose of lowering the heat generated by the cutting operation (Col. 6, lines 20-26).

Claims 10-12, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butterworth (U.S. Patent No. 6,718,853) in view of Sartori (U.S. Patent No. 5,383,380).

Butterworth teaches a log saw apparatus and method as set forth in the above rejection.

However, Butterworth fails to teach a cutting unit supported and guided on rail section.

Sartori teaches a machine for cutting sections from a cylindrical workpiece (C) having a support mandrel (5) and cutting blade (25) that is rotatably carried on carriage assembly (27) (see figure 1). Carriage assembly (27) is supported on guide rail section (32) for linear movement parallel to the mandrel (5) ('380, Col. 6, lines 61-68).

Regarding claims 12, 14 and 17, Butterworth discloses the claimed invention except for the measurement of the width of the groove on the mandrel. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to vary the width of the groove to accommodate the various blades that could be used having different thickness (i.e. width of blade at the periphery edge), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Applicant should further note that Specification gives no criticality to the claimed limitation (see Page 12, lines 4-8).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Butterworth's invention such that a cutting unit is supported and guided on rail section as taught by Sartori, since Butterworth teaches an alternative embodiment where the blade (saw) can be movable to align the different recesses of the mandrel with the blade ('853, Col. 3, lines 47-51).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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